

**What is claimed is:**

1. A speaker system comprising:

a speaker,

amplitude detecting means for detecting an amplitude

5 value of a diaphragm of the speaker to produce an amplitude signal corresponding to the amplitude value, and

adding means for adding the amplitude signal to a driving signal for driving the speaker.

2. A speaker system according to claim 1, wherein the amplitude detecting means comprises:

velocity detecting means for detecting a velocity of the diaphragm of the speaker to produce a velocity signal; and integrating means for integrating the integrated velocity signal to produce the amplitude signal.

3. A speaker system according to claim 2, wherein the integrating means is a first order low pass filter having a cutoff frequency that is lower than a lowest resonance frequency  $f_0$  of the speaker.

*add a<sup>2</sup> >*